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January 28, 1994

MEMBER OF NEW YORK BAR ONLY

**Via Certified Mail; Return Receipt Requested**

Mr. Lance R. Richman, P.G.  
Emergency and Remedial Response Division  
U.S. Environmental Protection Agency  
26 Federal Plaza, Room 13-100  
New York, New York 10278

Re: Request for Information - 42 U.S.C. §9601 et seq.  
Diamond Alkali Superfund Site  
Passaic River Study Area

Dear Mr. Richman:

I am enclosing herewith BASF Corporation's ("BASF") response to your request for information pursuant to 42 U.S.C. §9601 et seq., as it relates to the BASF facility formerly located at 50 Central Avenue, Kearny, Hudson County, New Jersey 07032. Please be advised that BASF is continuing the investigation in this matter and reserves the right to supplement and amend these answers as additional information becomes available.

If you have any questions concerning this response, please contact me directly.

Very truly yours,

*David P. Schneider / fac*

David P. Schneider

DPS/kmh  
Enclosures  
cc: Patricia C. Hick, Esq.

WRITER'S DIRECT LINE:  
1996  
JAN 31 1994  
FEB 1 1994  
ENVIRONMENTAL PROTECTION  
AGENCY, REGION II  
ERD SITE COMPLIANCE  
BRANCH

843990001

## RESPONSES TO USEPA'S REQUEST FOR INFORMATION

1. BASF and its predecessors in interest (hereinafter collectively referred to as "BASF") operated the facility formerly located at 50 Central Avenue, Kearny, Hudson County, New Jersey from 1966 until September 1990.
2. BASF formerly held RCRA Permit No. 0967B2HP01 for a hazardous waste container storage area and a draft RCRA permit for the hazardous waste incinerator. In addition, BASF was issued a draft Hazardous and Solid Waste Management Amendments ("HSWA") Permit which required BASF to investigate four units. The facility's EPA Identification Number was NJD046941530.
3. BASF did not, to the best of its knowledge, receive, utilize, manufacture, discharge, release or dispose of any pesticides, materials containing 2, 3, 7, 8 tetrachlorodibenzo-p-dioxin or any other dioxin compounds.

- 4(a). Description of Former Manufacturing Operations.  
BASF operated the Kearny, New Jersey facility from 1966 until September 1990. Operations conducted by BASF at the property included the production of dyes, polystyrene products, plasticizer and phthalic anhydride production. Products from these processes were generally phthalate esters which were produced both by continuous and batch methods. Phthalic anhydride, a core constituent for both of these ester processes, was also a continuous process. The following is a description of these processes:

- (1) Continuous Processes.

Phthalic Anhydride. Phthalic anhydride ("PA") was produced by the partial oxidation of orthoxylene over a fixed vanadium pentoxide catalyst bed. Sulfur dioxide was added to the orthoxylene/air mixture to maintain catalyst activity and selectivity. The reaction exotherm was removed using a eutectic solution whose temperature was controlled by the production of high pressure steam for on-site consumption. PA reaction gas was then cooled in a gas cooler where medium pressure steam was produced. The gas was further cooled and sublimed in switch condensers and melted into crude PA. Further refinement was accomplished through a two-step distillation process which

removed by-products as a light end distillate in the first column and a heavy end in the second column. These distillation residues were combined and burned in an on-site RCRA incinerator.

There were three blowdown streams associated with the PA processing which generated waste water: a gas cooler, oil cooler and cooling tower. The gas and oil cooler blowdown were directed to the Basacryl sump pit and the cooling tower blowdown was released to the sump via the sewer system. All of these effluents were ultimately treated through the Kearny site waste water treatment plant. Attached hereto as Exhibit A is an overall process flow diagram.

Continuous Ester (i.e. DEHP and DINP). The Continuous Ester Plant produced phthalate esters via the catalytic esterification of phthalic anhydride with an alcohol. Two products were campaigned in this plant. Bis (2-ethylhexyl) phthalate was produced using 2-EHOL as the alcohol while Palatinol-N was produced using n-nonanol. The process consisted of five basic steps: (i) esterification; (ii) alcohol removal; (iii) neutralization and washing; (iv) steam stripping and drying; and (v) filtration. Esterification was accomplished in a four reactor continuous cascade system. Water from the reaction was removed by azeotropic distillation with the excess alcohol returned as reflux to the first reactor and the water collected and used in the neutralization step. Ester quality was partially controlled by removing light fractions of the alcohol. This material was collected and sold as a co-product. Alcohol removed in the second step of the process was also recycled to the esterification section to maintain the proper excess. The small amount of monoester that remained was neutralized using dilute caustic. The sodium salt of the monoester which was soluble in water and the hydrolyzed catalyst which was insoluble in water was removed in the neutralization and wash step for collection and treatment in the site waste water treatment plant. Washed diester was steam stripped of any remaining alcohol. The

water/alcohol mixture was again separated with the water collected for use in neutralization and the alcohol recycled to esterification. The dry diester, essentially free of alcohol, was filtered through a leaf type filter using powered carbon and hy-flo as a filter aid.

- (2) Batch Ester Processes. The Specialty Esters Plant was a discontinuous (batch) operation in which six esters were produced in campaigns. Alcohols used in the process varied from C<sub>4</sub> to C<sub>9-11</sub>. The process consisted of five steps carried out in two vessels with auxiliary equipment: (i) esterification; (ii) alcohol stripping; (iii) neutralization and washing; (iv) steam stripping and drying; and (v) filtration.

Reaction and stripping water were collected and used for neutralization. Excess alcohol was recycled from batch to batch and campaign to campaign. Light fractions of the alcohol were removed and sold as a co-product. Neutralization and wash water containing both the soluble salt of the monoester and the insoluble hydroxide of the catalyst were collected and treated in the site waste water treatment plant. The washed diester was steam stripped of residual alcohol and dried. Alcohol and water from stripping and drying operations were collected and reused in subsequent batches for excess alcohol and wash water, respectively. The diester was filtered through a leaf type filter.

- (b) Varying quantities of hazardous substances were generated as a result of each of the above described manufacturing processes. The specific hazardous substances are identified in Exhibit B.

5. Methods of Collection, Storage, Treatment and Disposal of Hazardous Substances.

See Exhibit B for an inventory of hazardous substances and wastes.

- (a) Pursuant to the 1989 New Jersey Department of Environmental Protection Hazardous Waste Generator Annual Report, wastes were taken off-site as follows:

- (i) Transporter: Applied Technologies  
Disposal Facility:  
    / ENSCO  
    American Oil Road  
    El Dorado, Arizona 71730
- (ii) Transporter: Applied Technologies  
Disposal Facility:  
    ENSCO Services of Georgia  
    1015 New South Harris Street  
    Dalton, Georgia 30720
- (iii) Transporter: Lionetti Oil Recovery, Inc.  
Disposal Facility:  
    Lionetti Oil Recovery, Inc.  
    Runyon & Cheesequake Roads  
    Old Bridge, New Jersey 08857
- (iv) Transporter: Chemical Waste Management,  
    Inc.  
Disposal Facility:  
    SCA Model City Facility  
    P.O. Box 200-1550 Balmer Road  
    Model City, New York 14107
- (v) Transporter: Wills Trucking Co.  
Disposal Facility:  
    Envirosafe Services of Ohio  
    876 Otter Creek Road  
    Oregon, Ohio 43616
- (vi) Transporter: Nappi Trucking Corporation  
Disposal Facility:  
    Michigan Disposal  
    4935 North I-94 Service Drive  
    Belleville, Michigan 48111
- (vii) Transporter: Price Trucking  
Disposal Facility:  
    Chemical Waste Management, Inc.  
    Alabama Highway 17 at Mile Marker  
        163  
    Emelle, Alabama 35459
- (viii) Transporter: Wills Trucking Co.  
Disposal Facility:  
    Chemical Waste Management, Inc.  
    Alabama Highway 17 at Mile Marker  
        163  
    Emelle, Alabama 35459

(ix)           Transporter: Suttles Truck Leasing, Inc.  
                  Disposal Facility:  
                            Chemical Waste Management, Inc.  
                            Alabama Highway 17 at Mile Marker 163  
                            Emelle, Alabama 35459

(x)            Transporter: Chemical Waste Management,  
                            Inc.  
                  Disposal Facility:  
                            Chemical Waste Management, Inc.  
                            Alabama Highway 17 at Mile Marker 163  
                            Emelle, Alabama 35459

(xi)           Transporter: Andax Environmental  
                            Edgewater, New Jersey

(b)           Hazardous wastes were stored on-site in accordance  
                  with RCRA Permit No. 0967B2HP01/ identified in  
                  BASF's response to Question No. 2.

6(a).           Summary of Waste Water Discharges of Sanitary  
                  and/or Industrial Waste.

The sewer system at the facility was comprised of three components: storm water, process flows and sanitary flows. The process and storm water flows were combined as a single sewer system while the sanitary sewer system was separated and discharged directly to the trunk sewer line to the Town of Kearny Treatment Facility (Kearny POTW). Process and storm water flows were directed to sewer and sump systems for pre-treatment at BASF's waste water treatment plant located at the far southern portion of the property.

Process/Storm Water Sewer System

Process flows were derived from a variety of sources at the facility. Process waste water from the Continuous Ester Plant and the Batch Ester Plant were directed to the sumps. Process waste water then flowed to two treatment tanks, the clarifier, a post-neutralizer and two sumps before outflow to the Kearny POTW. Non-contact cooling water blowdown was directed to the Basacryl pit. Water from the oil and gas coolers and non-contact boiler house water were also directed to the Basacryl pit sump.

### Storm Sewer

Storm water was directed via the storm water sewer system to a sump. Storm flows were originally discharged to the Passaic River through two concrete pipes located near the fire water tank on the southern tip of the property. However, in 1989, BASF voluntarily discontinued the NJPDES permit for this outfall and plugged the two pipes while simultaneously directing storm flows to the process sewer.

### Sanitary Sewer

The sanitary sewer collection system discharged to a sump which then discharged to the Kearny POTW. The sump was the sole location where all three sewer systems (sanitary, treated process and treated storm) were mixed on BASF's property. Prior to this point, the process/storm and sanitary sewers were distinct. BASF was a permitted industrial discharger to the Kearny POTW which was located immediately east of BASF's property on South Kearny Point.

- (b) All floor drains were connected to the process waste water sumps. As more fully described in the reponse to Question No. 6(a), waste waters in these sumps were treated prior to discharge to the Kearny POTW.
  - (c) A description of the storm sewer system is provided in response to Question No. 6(a). See also Exhibit C.
  - (d) See Exhibit C for sewer plans of the facility's process, sanitary and storm sewers.
- 7(a) See Exhibit B for an inventory of hazardous substances and wastes.
- (b) All discharges to the Passaic River were at NJPDES permitted outfalls.

8. Discharge History of Hazardous Substances and Wastes.

Spills and/or discharges of hazardous substances exceeding the reportable quantities under the Discharge Prevention Containment and Countermeasure ("DPCC") Plan are summarized in Exhibit D. It

should be noted that Exhibit D contains information which was required by internal policy pursuant to the DPCC Plan. Threshold values for spill reporting for internal safety may have been lower than regulatory reporting requirements. The general locations of these spills are identified by an asterisk on Exhibit E.

9. See Exhibits D and E.
10. In response to Question Nos. 4, 5 and 7, BASF identified wastes generated during manufacturing processes, the haulers used to transport the waste, the disposal facilities and those hazardous wastes stored on-site pursuant to RCRA Permit No. 0967B2HP01. The majority of the documents relating to these wastes have been destroyed or are no longer in the possession of BASF.
11. BASF will provide this information in a supplemental response.
12. The following entities owned or operated the facility from 1940 until the present:
  - (a) United Cork Company from the mid-1930s until 1964.
  - (b) BASF operated from 1966 until September 1990. The property is still owned by BASF.
13.
  - (a) BASF Corporation
  - (b) J. Dieter Stein, President and Chief Executive Officer
  - (c) Delaware
  - (e) BASF Corporation is a wholly owned subsidiary of BASF Aktiengesellschaft, Ludwigshafen, West Germany.
14. This response was prepared by David P. Schneider, Esq., Bressler, Amery & Ross, P.O. Box 1980, Morristown, New Jersey 07962, (201) 514-1200, in consultation with the following employees of BASF, 8 Campus Drive, Parsippany, New Jersey 07054:

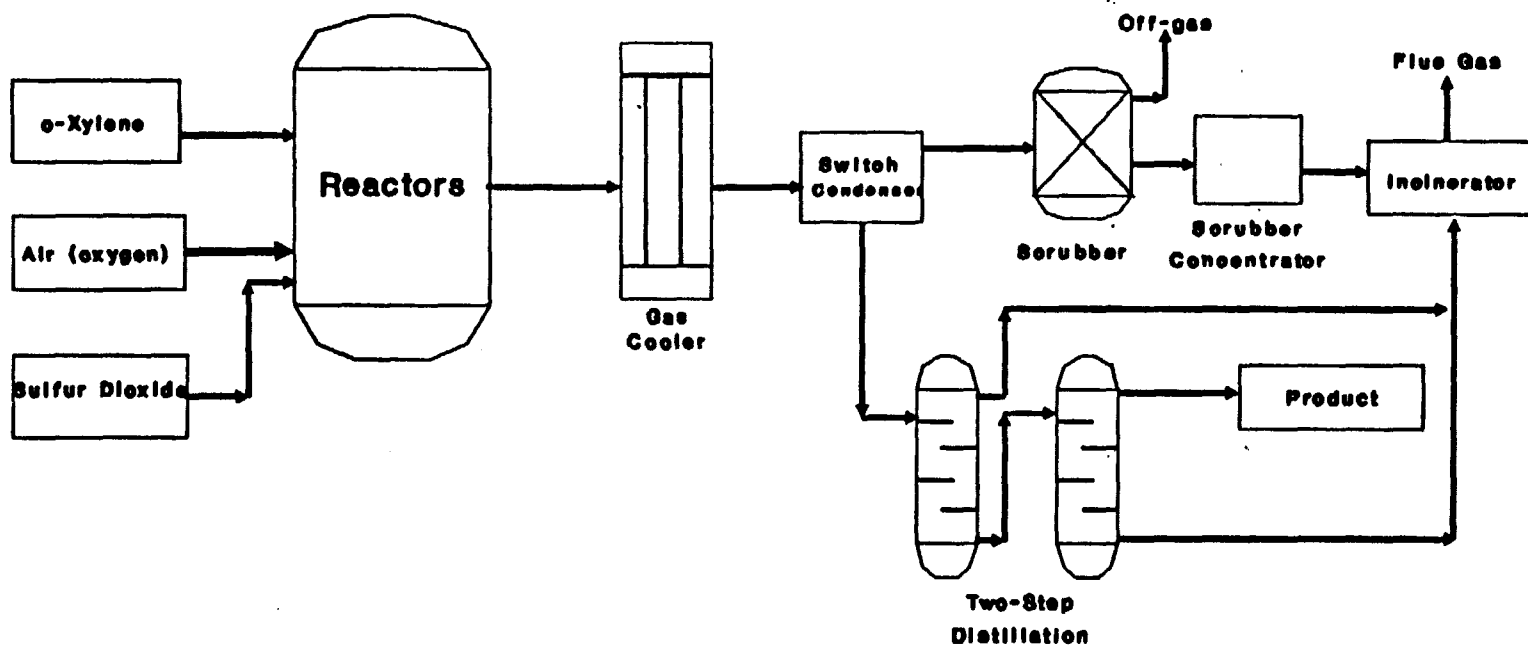
- (a) Joseph Nalio, Corporate Ecology, former Kearny plant manager;
- (b) John Byrnes, Corporate Ecology; and
- (c) Brian Diepeveen, Corporate Ecology.

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**BASF CORPORATION  
KEARNY, NEW JERSEY**

**PHTHALIC ANHYDRIDE  
PROCESS FLOW DIAGRAM**

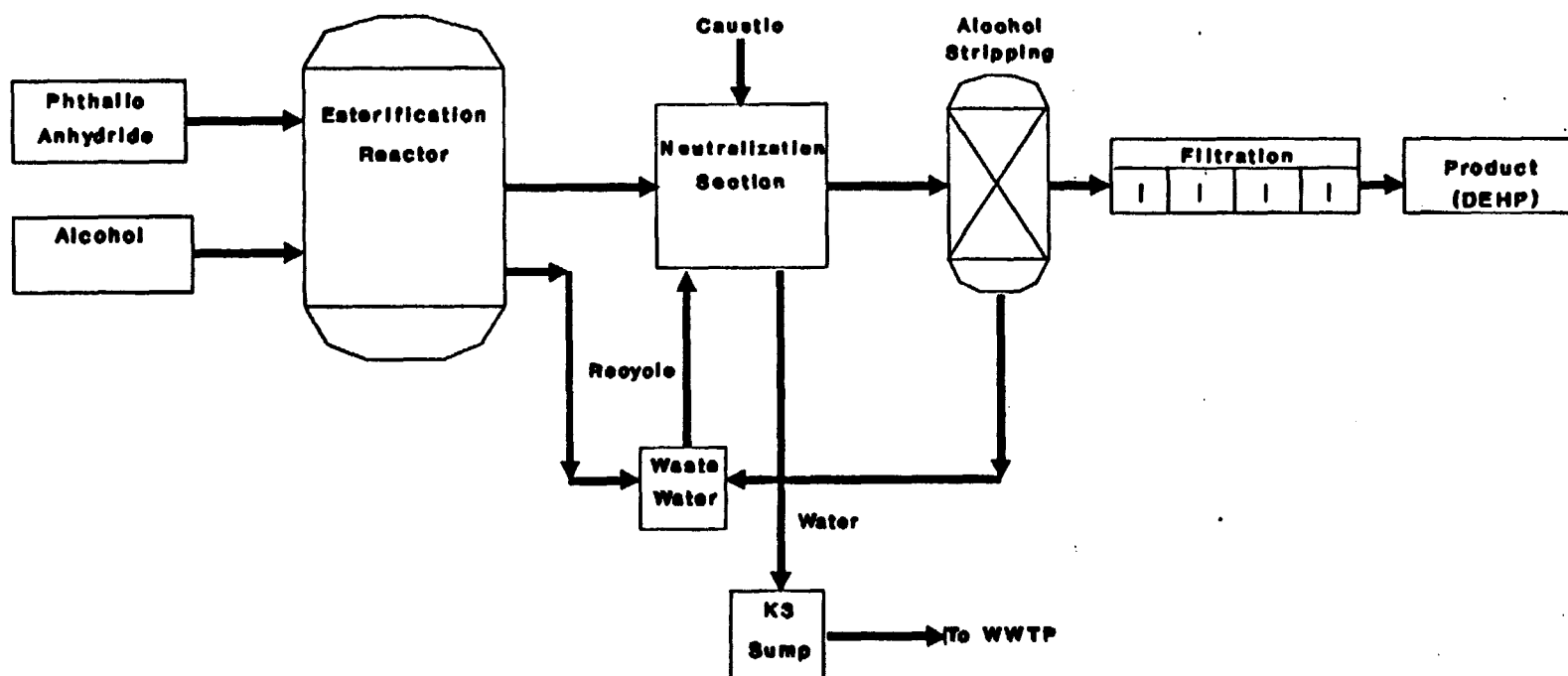
EXHIBIT A



**BASF CORPORATION**  
**KEARNY, NEW JERSEY**

**CONTINUOUS ESTER**  
**PROCESS FLOW DIAGRAM**

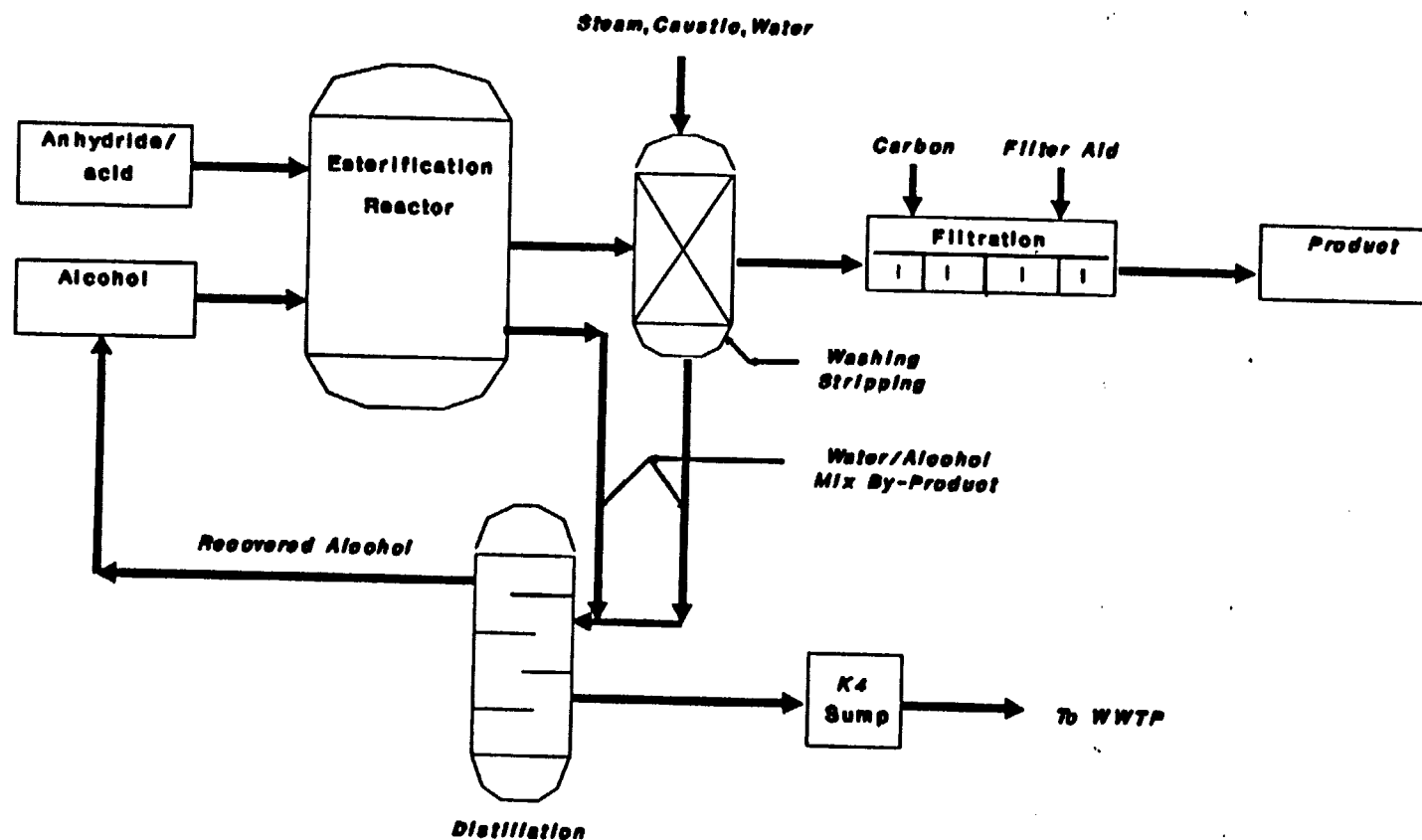
EXHIBIT A



**BASF CORPORATION  
KEARNY, NEW JERSEY**

**BATCH ESTER PROCESS  
FLOW DIAGRAM**

EXHIBIT A



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EXHIBIT B

## EXHIBIT B

BASF CORPORATION, INC.  
Kearny, New Jersey

8. Hazardous Substance and Waste Containment Description

<u>Type of Storage Unit</u>	<u>Date Installed</u>	<u>Area or Volumetric Capacity</u>	<u>Material Stored</u>	<u>Constr. Type</u>	<u>Equipment Reference Code</u>
DRUM	1980	2875G	WATER	CS	BE-D303
DRUM	1980	3500G	ALCOHOL	SS	BE-D305
DRUM	1980	3500G	ALCOHOL	SS	BE-D306A
DRUM	1980	3500G	ALCOHOL	SS	BE-D306C
DRUM	1980	3500G	ALCOHOL	SS	BE-D306D
DRUM	1980	3500G	ALCOHOL	SS	BE-D307A
DRUM	1980	7000G	ALCOHOL	SS	BE-D307B
DRUM	1980	7000G	ALCOHOL	SS	BE-D307C
SEPARATOR	1979	1600G	ESTER WATER	CS	BE-D312
DRUM	1980	800G	FILTRATE	CS	BE-D320
TANK	1979		DEMINEALIZED WATER	FRP	BE-D326
DRUM	1980	2800G	ALKALINE WASH	SS	BE-D328
SEPARATOR	1979	150G	ESTER	CS	BE-D332
DRUM	1980	200G	ETHYL GLYCOL	CS	BE-D404
DRUM	1979	1900G	OIL	CS	BE-D431
DRUM	1980	300G	ESTER	SS	BE-D433
HOPPER	1980		ESTER	ALUM	BE-H202
VENT BOX	1980	78G	PHTHALIC ANHYDRIDE	SS	BE-H203
HOPPER	1980	400G	ESTER	SS	BE-H204
TANK	1980	110000G	BUTANOL	CS	BE-TK101
TANK	1980	56000G	AQUEOUS WASTE	CS	BE-TK901
TANK	1980	15000G	ORGANIC WASTE	CS	BE-TH902
POT	1971	20G	D OCTYLPHTHALATE	CS	DO-MM1
POT	1971	20G	D OCTYLPHTHALATE	CS	DO-MM2
TANK	1981	375G	CAUSTIC	SS	DO-MR321
TANK	1971		CARBON DIESTER		DO-MR350
TANK	1981	2000G	RECOVERED ALCOHOL	SS	DO-MS303
SEPARATOR	1981	350G	ALCOHOL	SS	DO-MS311
TANK	1981	2000G	CRUDE ESTER	SS	DO-MS314
TANK			ALCOHOL-CRUDE ESTER		DO-MS316
SEPARATOR	1981	169G	D OCTYLPHTHALATE	SS	DO-MS318
SEPARATOR	1981	39900G	MONOESTER/DIESTER	CS	DO-MS322
SEPARTOR	1981	39900G	DIESTER	CS	DO-MS323
TANK	1981	1800G	WASHED DIESTER	CS	DO-MS324
TANK	1970	500G	WASTEWATER	CS	DO-MS326
TANK	1970	1000G	FINISHED DIESTER	CS	DO-MS332
TANK	1970	450G	ALCOHOL	CS	DO-MS333
TANK	1981	540G	D OCTYLPHTHALATE	SS	DO-MS335
TANK	1970	880G	D OCTYLPHTHALATE	CS	DO-MS351
TANK	1970	500G	MONOESTER	CS	DO-MS360
TANK	1972	450G	MONOESTER ACID	SS	DO-MS361
TANK	1970	450G	MONOESTER	SS	DO-MS362

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Type of Storage Unit	Date Installed	Area or Volumetric Capacity	Material Stored	Constr. Type	Equipment Reference Code
TANK	1970	280G	MONOESTER	SS	DO-MS363
DECANTER	1981	39900G	CAUSTIC	CS	DO-MS365
TANK	1981	376G	WASHWATER	SS	DO-MS366
TANK	1970	1000G	CAUSTIC	CS	DO-MS381
TANK	1970	400G	SULFURIC ACID	SS	DO-MS382
TANK	1970	1500G	MARLOTERM	CS	DO-MS383
TANK	1971	1300G	D OCTYLPHTHALATE	CS	DO-MS384
TANK	1971	50G	WASTE ORGANICS	CS	DO-MS385
TANK	1971	550G	WASTEWATER	CS	DO-MS386
TANK	1979	6000G	WASTEWATER	CS	DO-MS400
TANK	1975	8000G	WASTE OIL	CS	DO-MS781
TANK	1975	500G	WASTE OIL	CS	DO-MS780
TANK	1981	5000G	CARBON SLURRY	CS	DO-R350A
TANK	1981	5870G	WASTEWATER	CS	DO-TK903
TANK	1973	5000G	HCL	FG	DW-TK330
TANK	1973	30000G	DEMINEALIZED WATER	FG	DW-TK345
TANK	1973	200G	CAUSTIC	CS	DW-V310
TANK	1973	200G	HCL	CS	DW-V320
TANK	1980	12000G	PHTHALIC ANHYDRIDE	SS	FG-D203
TANK	1969	54000G	REFINED PHTHALIC AN	SS	FG-MF503
TANK	1969	54000G	REFINED PHTHALIC AN	SS	FG-MF504
TANK	1969	54000G	REFINED PHTHALIC AN	SS	FG-MF505
TANK	1970	27000G	D OCTYLPHTHALATE	ALUM	FG-MF506
TANK	1970	27000G	REFINED D OCTYLPHTHALATE	ALUM	FG-MF507
TANK	1979	300000G	PHTHALIC ANHYDRIDE	SS	FG-MF511
TANK	1970	270000G	REFINED DOP	ALUM	FG-MF512
TANK	1979	67000G	D OCTYLPHTHALATE	CS	FG-MF513
TANK	1970	27000G	REFINED DOP	ALUM	FG-MF706
TANK	1970	27000G	REFINED DOP	ALUM	FG-MF707
TANK	1970	270000G	REFINED DOP	ALUM	FG-MF712
TANK	1979	150000G	6-10 PRODUCT	CS	FG-TK120
TANK	1979	150000G	TBP PRODUCT	CS	FG-TK121
TANK	1979	150000G	DIDP PRODUCT	CS	FG-TK122
TANK	1979	150000G	DOA PRODUCT	CS	FG-TK123
TANK	1979	150000G	BOP PRODUCT	CS	FG-TK124
TANK	1979	150000G	TOTM-E PRODUCT	CS	FG-TK125
TANK	1979	18000G	BLEND PRODUCTS	SS	FG-TK126
TANK	1986	58000G	TOTM PRODUCT	CS	FG-TK127
TANK	1986	98000G	91P	CS	FG-TK128
TANK			PHTHALIC ANHYDRIDE		FK-D110
HOPPER			PHTHALIC ANHYDRIDE		FK-H110
HOPPER			PHTHALIC ANHYDRIDE		FK-H210
TANK	1970	54000G	CRUDE PHTHALIC AN	CS	PA-MF108A
TANK	1970	54000G	CRUDE PHTHALIC AN	CS	PA-MF108B
TANK			MALEIC ACID		PA-MF114
TANK	1970	3600G	PHTHALIC ANHYDRIDE	CS	PA-MS102A
TANK	1970	3600G	PHTHALIC ANHYDRIDE	CS	PA-MS102B
TANK	1970	7000G	PHTHALIC ANHYDRIDE	CS	PA-MS104A
TANK	1970	7000G	PHTHALIC ABHYDRIDE	CS	PA-MS104B
TANK	1970	8000G	COLD OIL	CS	PA-MS105

## EXHIBIT B

Type of Storage Unit	Date Installed	Area or Volumetric Capacity	Material Stored	Constr. Type	Equipment Reference Code
TANK	1970	5000G	HOT OIL	CS	PA-MS106
DRUM	1970	1000G	PHTHALIC ANHYDRIDE	SS	PA-MS109
SEPARATOR	1970	18000G	PHTHALIC ANHYDRIDE	SS	PA-MS110
TANK			PHTHALIC ANHYDRIDE		PA-MS184
TANK	1970	700G	PHTHALIC ANHYDRIDE	SS	PA-MS202
TANK	1970	250G	PHTHALIC ANHYDRIDE	SS	PA-MS203
TANK	1970	8000G	MARLOTHERM	CS	PA-MS204
TANK	1970	12000G	PHTHALIC ANHYDRIDE	SS	PA-MS207A
TANK	1970	12000G	PHTHALIC ANHYDRIDE	SS	PA-MS207B
TANK	1969	34000G	NO. 6 FUEL OIL	CS	RM-MF501
TANK	1969	275000G	ORTHOXYLENE	CS	RM-MF502
TANK	1969	110000G	ALCOHOL	CS	RM-MF508
TANK	1969	110000G	ALCOHOL	CS	RM-MF713
TANK	1979	100000G	ALCOHOL	CS	RM-MF715
TANK	1972		60% CAUSTIC	CS	RM-MS390
TANK			SULFUR DIOXIDE		RM-MS509
TANK	1979	110000G	BUTANOL	CS	RM-TK101
TANK	1979	110000G	ISODECANOL	CS	RM-TK103
TANK	1979	110000G	6-10 ALCOHOL	CS	RM-TK104
TANK			FUEL OIL		SD-TK420
TANK	1977	5000G	SULPHURIC ACID	CS	WW-KS280
TANK	1980	570000G	WASTEWATER	CONC	WW-T5117
TANK	1978	500000G	WASTEWATER	CONC	WW-T5118
TANK	1972	13500G	35% LIME	CS	WW-T5104
TANK	1972	13500G	15% LIME	CS	WW-T5105
TANK	1972	4500G	WASTEWATER	CS	WW-T5106
TANK	1972	4500G	WASTEWATER	CS	WW-T5107
TANK	1979	5000G	WASTEWATER	FRP	WW-T5108
CLARIFIER	1972	100000G	WASTEWATER	CS	WW-T5109
TANK	1972	3000G	POLYMER SLURRY	CS	WW-T5114
TANK	1972	1500G	COPOLYMER SLURRY	CS	WW-T5115
TANK	1972	3000G	CARBON/ BaSO4	FRP	WW-T5116
TANK	1977	4500G	SULPHURIC ACID	CS	WW-T5280
DUMPSTER	1972	40 CU.YDS	DEWATERED SLUDGE	CONC/ASP	
TANK	1972	20000G	ALCOHOL/ESTER	FRP	TK-3010
TANK	1972	5880G	ALCOHOL/ESTER	FRP	TK-3007
TANK	1972	9156G	ALCOHOL/ESTER	CS	TK-3006
TANK	1972	5880G	ALCOHOL/ESTER	CS	TK-3004
TANK	1972	5880G	ALCOHOL/ESTER	CS	TK-3009
TANK	1972	5880G	ALCOHOL/ESTER	CS	TK-3003
TANK	1972	19950G	ALCOHOL/ESTER	CS	TK-3011
TANK	1972	9156G	ALCOHOL/ESTER	CS	TK-3001
TANK	1972	5880G	ALCOHOL/ESTER	CS	TK-3002
TANK	1976	19992G	ALCOHOL/ESTER	CS	TK-3008
TANK	1976	19992G	ALCOHOL/ESTER	CS	TK-3012
TANK	1972	6000G	EMPTY	CS	D-3002
TANK	1972	1200G	EMPTY	CS	D-3001

CS - Carbon Steel  
SS - Stainless Steel

Alum - Aluminum  
Conc - Concrete

FRP - Fiber Reinforced Plastic  
FG - Fiberglass

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BASF CORPORATION  
Kearny, New Jersey

Hazardous Substance and Waste Inventory

<u>Material Name</u>	<u>Location Reference</u>	<u>Container</u>	<u>Typical Usage*</u>	<u>To Remain On-Site</u>
Acetic Acid Glacial	QC Lab	Bottle	10	No
Acetone	QC Lab	Drum	12	No
Acetyl Chloride	QC Lab	Bottle	11	No
Amyl Acetate	QC Lab	Bottle	11	No
Ammonium Bifluoride	Env Lab	Bottle	09	No
Ammonium Chloride	Env Lab	Bottle	09	No
Ammonium Hydroxide	QC/Env Lab	Bottle	11	No
Ammonium Carbonate	QC Lab	Bottle	11	No
n-Butyl Ether	QC Lab	Bottle	11	No
Acetylene	Storeroom	Cylinder	4380 CYL	No
Adhesives	Storeroom	Cans	11	No
Adipic Acid	BEP Plant	Tank	16	No
Ammonia	PA Tank Farm	Tank	16	No
Barium Compound	WW Plant	Bag	14	No
Benzaldehyde	QC Lab	Bottle	11	No
Benzoic Acid	QC Lab	Bottle	11	No
Bisphenol A	BEP Plant	Bags	14	No
Butyric Acid	QC Lab	Bottle	11	No
Sulphuric Acid	Truck Shop	Can	11	No
Bis(2-ethylhexyl)adipate	BEP Plant	Tank	13	No
Bis(2-ethylhexyl)phthalate	DOP Tank Farm	Tank	17	No
n-Butanol	BEP Plant	Tank	14	No
Calcium Oxide	WWTP	Tank	16	No
Carbon Dioxide	Storeroom	Cylinder	3x365	No
Carbon Disulfide	Env Lab	Bottle	09	No
Carbon Tetrachloride	QC Lab	Bottle	11	No
Chromic Acid	Env Lab	Bottle	09	No
Cumene	QC Lab	Bottle	11	No
Cyclohexanol	QC Lab	Bottle	11	No
Cyclohexane	QC Lab	Bottle	11	No
1,4 Dioxane	QC Lab	Bottle	10	No

\*The quantum of materials identified are typical annual usage for operations at the facility.

## EXHIBIT B

<u>Material Name</u>	<u>Location Reference</u>	<u>Container</u>	<u>Typical Usage</u>	<u>To Remain On-Site</u>
Diazomethane	QC Lab	Bottle	10	No
Dimethyl Sulfate	QC Lab	Bottle	10	No
2,2 Diethoxyethanol	QC Lab	Bottle	10	No
Diethyl Ether	QC Lab	Can	10	No
Dimethyl Sulfate	QC Lab	Bottle	10	No
Ethyl Acetate	Env Lab	Bottle	09	No
Ethyl Alcohol	QC Lab	Drum	12	No
Ferric Chloride	Env Lab	Bottle	09	No
Formaldehyde	QC Lab	Bottle	09	No
Hexanes	QC Lab	Bottle	11	No
Isobutyraldehyde	QC Lab	Bottle	11	No
Isopropyl Alcohol	QC Lab	Bottle	10	No
Paint	Storeroom	Can	12	No
Di-n-butyl Phthalate	BEP Plant	Tank	14	No
#2 Fuel Oil	PA Boiler	Tank	17	No
Gasoline	Storeroom	Tank	13	No
Hazardous Waste	WWTP Storage	Drum/Tote Bin	14	No
Hydrazine	PA/CEP Plant	Drum	11	No
Hydrochloric Acid	Env(10)/Boiler	Tank	15	No
Hydrogen Peroxide	Env/BEP Plant	Tank	11	No
Maleic Anhydride	QC Lab	Bottle	10	No
Maleic Acid	QC Lab	Bottle	10	No
Nichlers Ethyl Ketone	QC Lab	Bottle	10	No
2-Methoxyethanol	QC Lab	Bottle	10	No
Methanol	QC Lab	Bottle	11	No
Methylene Chloride	QC Lab	Bottle	10	No
Trichloroethylene	QC Lab	Bottle	11	No
Methyl Cyclohexane	QC Lab	Bottle	10	No
4,4-Isopropylidenediphenyl	BEP Plant	Bag	12	No
Mercury	Elec Shop/Lab	Bottle	10	No
Nitric Acid	Env Lab	Bottle	09	No
p-Nitroaniline	QC Lab	Bottle	09	No
o-Toluidine	QC Lab	Bottle	11	No
Phenol	QC Lab	Bottle	09	No
Phosphoric Acid	QC Lab	Bottle	10	No
Potassium Dichromate	QC Lab	Bottle	10	No

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## EXHIBIT B

<u>Material Name</u>	<u>Location Reference</u>	<u>Container</u>	<u>Typical Usage</u>	<u>To Remain On-Site</u>
Methanesulfonic Acid	BEP Plant	Plastic Drum	12	No
Phthalic Anhydride	BEP Plant	Tank	17	No
Phthalic Anhydride	Palanil Warehouse	Bag	11	No
Polychlorinated Biphenyls	PA/CEP Plant	Drum	11	No
Potassium Permanganate	BEP Plant	Drum	13	No
Pyridine	QC Lab	Bottle	10	No
Cesium 137	PA/CEP Plant	N/A	N/A	No
Silver Nitrate	Env Lab	Bottle	10	No
Sodium Nitrate	Env/QC Lab	Bottle	10	No
Stannous Chloride	QC Lab	Bottle	10	No
Toluene	QC Lab	Bottle	10	No
Tetrahydrofuran	QC Lab	Bottle	11	No
1,2,4 Trimethyl Benzene	QC Lab	Bottle	11	No
1,3,5 Trimethyl Benzene	QC Lab	Bottle	10	No
Trichlorotrifluoromethane	Env/QC Lab	Bottle	10	No
Triethylamine	Env Lab	Bottle	09	No
m-Xylene	QC Lab	Bottle	10	No
p-Xylene	QC Lab	Bottle	10	No
Zinc Powder	QC Lab	Bottle	10	No
Sodium Hydroxide	BEP/Palanil Env	Drum, Tank Bottle	13 10	No No
Sulfur Dioxide	PA Plant	Tank	13	No
Sulfuric Acid	BEP/WWTP	Tank, Drum	14	No
Trichloroisocyanuric Acid	PA Tank Farm	Drum	11	No
Trimellitic Anhydride	BEP Plant	Bag	14	No
Vanadium Pentoxide	Palanil Wareh.	Drum	15	No
Waste Oil	Truck Shop	Drum	12	No
O-Xylene	PA Plant	Tank	17	No
Mixed Esters	BEP Plant	Tank	18	No
Bis(2-ethylhexyl)phthalate	CEP Plant	Tank	18	No
Scrubber Water	PA Plant	Tank	14	No
Entec 320,321,340,346,351	PA Plant	Drum	1275 gal	No
Entec 234	PA Plant	Drum	140 gal	No
Entec 349	PA Plant	Drum	840 gal	No
Entec 369	PA Plant	Drum	200 gal	No
Entec 610, 620	WWTP	Drum	675 gal	No

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O'BRIEN &amp; GERE

## EXHIBIT B

<u>Material Name</u>	<u>Location Reference</u>	<u>Container</u>	<u>Typical Usage</u>	<u>To Remain On-Site</u>
Entec 709	Boiler Room	Drum	280 gal	No
Entec 713	Boiler Room	Drum	510 gal	No
Entec 733	Boiler Room	Drum	170 gal	No
Entec 750	Boiler Room	Drum	135 gal	No
Entec 840	PA/Boiler	Drum	1800 gal	No
Acetylene	Maintenance	Cylinder	12	No
Adipic Acid	PA Tank Farm	Tank	13	No
Ammonia, Anhydrous	PA Tank Farm	Bottle	11	No
Amyl Acetate (n-)	QC Lab	Bottle	11	No
Argon	Storeroom	Cylinder	12	No
Bisphenol A	QC Lab	Bottle	10	No
Butanediol (1,4-)	QC Lab	Bottle	10	No
Carbon	BEP/CEP/WW	Bag		No
Decyl Alcohol	BEP	Tank	19	No
Diocetyl Phthalate	CEP	Tank	20	No
Diphenyl DT	Palanil Warehouse	Drum	09	No
Dowtherm 6	BEP	Drum/Tank	11	No
Entec 327	PA	Drum	11	No
Entec 353	PA	Drum	11	No
Entec 361	PA	Drum	11	No
Entec 722	PA	Drum	11	No
Entec 741	Boiler	Drum	11	No
Entec 763	PA Plant	Drum	11	No
Entec 921	PA Plant	Tank	175 gal	No
Ethyl-1-Hexanol 2-ethylhexanol	CEP/BEP	Tank	20	No
Ethylene Glycol	BEP	Drum/Tank	11	No
Fuel Oil Additive 7D-24	Boiler	Drum	11	No
Halite (Sodium Chloride)	Storeroom	Bag	15	No
Hitec Heat Salt	PA	Bag	13	No
Hydrochloric Acid	Boiler	Poly Tank	13	No
Hydrogen Peroxide (27-52%)	BEP	Tank	13	No
Hydrogen Peroxide (60%)	BEP	Tank	13	No
Hyzeen	PA	Drum	13	No
Isononyl Alcohol	BEP	Tank	17	No
Maleic Anhydride	QC Lab	Bottle	10	No
Marlotherm S	CEP	Tank/Drum	14	No

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O'BRIEN &amp; GERE

## EXHIBIT B

Page 5

<u>Material Name</u>	<u>Location Reference</u>	<u>Container</u>	<u>Typical Usage</u>	<u>To Remain On-Site</u>
Methane Sulfonic Acid	BEP	Drum	14	No
Natural Gas	Pipeline	Pipeline	224,640 Decatherms (avg. per year)	No
Neodol '91	BEP	Tank	19	No
Neoflex 11	BEP	Tank	19	No
Neoflex 911	BEP	Tank	19	No
Neopentyl Glycol	PA/CEP	Tank	16	No
Nitrogen	PA	Tank	17	No
No. 6 Fuel Oil	PA/Maintenance	Tank	13	No
Nonanol M	CEP/BEP	Tank	20	No
Nu Dri	Storeroom	Bag	13	No
Orthoxylene	PA	Tank	20	No
Palatinol (Brand name for many products)	CEP/BEP	Tank	20	No
P-5050	BEP	Tank	18	No
Tributyl Phosphate	BEP/PA	Tank	19	No
Phthalic Anhydride	BEP	Drum	13	No
Potassium Permanganate	ALC Site	Cylinder	14	No
Propane	PA	Tank/Cylinder	14	No
Sodium Chloride	BEP	Bag	13	No
Sodium Hydroxide	BEP	Tank	14	No
Sulfur Dioxide	PA Plant	Tank	15	No
Sulfuric Acid	BEP/WWT	Tank	15	No
Tetra-n-butyl Titanate	BEP/CEP	Drum	16	No
Topanol	BEP	Drum	13	No
Trimellitic Anhydride	BEP	Bag	17	No
Vanadium Pentoxide	Palanil Warehouse	Drum	17	No

Key: Typical Usage Range codes (pounds)

20	greater than 10 million
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	110 - 1,000
11	11 - 110
10	1 - 10
09	less than 1

843990022

O BRIEN &amp; GERE

843990023

Exhibit C

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS  
CENTER, 290 BROADWAY, 18<sup>TH</sup> FLOOR, NY, NY 10007

# PROCESS SEWER PLAN

FIGURE 7-1

AUGUST 1990

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843990024

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS  
CENTER, 290 BROADWAY, 18<sup>TH</sup> FLOOR, NY, NY 10007

# **SANITARY SEWER PLAN**

**FIGURE 7--2**

**AUGUST 1990**

**843990025**

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS  
CENTER, 290 BROADWAY, 18<sup>TH</sup> FLOOR, NY, NY 10007

# STORM SEWER PLAN

FIGURE 7-3

AUGUST 1990

843990026

843990027

Exhibit D

BASF CORPORATION  
Kearny, New Jersey

Former Spills or Discharges

EXHIBIT D

<u>Reference Number</u>	<u>Date</u>	<u>Chemical Released</u>	<u>Amount</u>	<u>Reported To</u>	<u>Action Taken</u>
S-1	1973	2-ethylhexanol	150,000 gal	BASF	unknown
S-2	1965	#6 Fuel oil	unknown	unreported	none; oil from boiler was permitted to leak into soil by previous owner
S-3	1976	Molten Phthalic anhydride (old dye lab)	unknown	BASF	permitted to harden, chipped away
S-4	1/2/90	EP275 (mixed phthalate esters)	unknown	BASF	excavation of contaminated soil and debris
S-5	4/11/90	bis(2-ethylhexyl)phthalate(DEHP)	35 gal	BASF	outside contractor cleanup (Cambridge)
S-6	1977	indigo spill Palanil Plant	1,500	BASF	to sewer to WTP
S-7	5/19/90	Phthalic Anhydride (PA)	50-70 gal	BASF	cleaned up
S-8	4/11/90	DEHP	35 gal	BASF	outside contractor cleanup (Cambridge)
S-9	2/22/90	Water/alcohol mix	10 gal	BASF	none seepage occurred
S-10	2/13/90	DEHP	20 gal	BASF	directed to sewer to WTP
S-11	12/19/89	TOTN-E	25-35 gal	BASF	cleanup effected by BASF
S-12	1/6/90	Palanil N	10-20 gal	BASF	contained in dike
S-13	12/19/89	PA	15-20 gal	BASF	unknown
S-14	11/28/89	DEHP	4,000 gal	BASF	contained in dike/DEHP reworked
S-15	11/21/89	DEHP	15 gal	BASF	contained in drain
S-16	11/8/89	PA	85-90 gal	BASF	outside contractor cleanup (Cambridge)
S-17	9/5/89	DEHP	100 gal	BASF	outside contractor cleanup (Cambridge)
S-18	8/10/89	DEHP	200 gal	BASF	outside contractor cleanup (Cambridge)
S-19	5/3/89	PA	30-35 gal	BASF	spill dispersed with water
S-20	1/15/88	PA	45-50 gal	BASF	unknown

843990028

S-21	8/31/87	DEHP	30-40 gal	BASF	BASF cleaned up spill
S-22	9/8/87	PA	10 gal	BASF	contained in dike
S-23	4/30/87	2-ethylhexanol (EH)	100 gal	BASF	contained in dike
S-24	4/26/87	ZEH	500 gal	BASF	contained in dike
S-25	4/15/87	DEHP	100 gal	BASF	BASF cleaned up spill
S-26	4/22/86	TOTH-E	20 gal	BASF	pads applied to spill
S-27	4/3/86	mixed organics	5-30 gal	BASF	unknown
S-28	4/2/86	DEHP	20 gal	BASF	contained in dike
S-29	3/10/86	DEHP	30-40 gal	BASF	unknown
S-30	3/3/86	PAL-N	5-10 gal	BASF	soda ash applied; spill cleaned up
S-31	2/6/86	PA	200 gal	BASF	unknown
S-32	12/19/85	Waste organics	unknown	BASF	unknown
S-33	12/2/85	Wastewater	unknown	BASF	unknown
S-34	10/23/85	91P	20-25 gal	BASF	overflow of sump due to rain
S-35	8/30/85	Wastewater	34,000 gal	BASF	overflow of sump due to rain
S-36	6/24/85	Wastewater	unknown	BASF	unknown
S-37	6/13/85	DEHP	400-500 gal	BASF	spill on concrete
S-38	1/3/85	PA	20 gal	BASF	unknown
S-39	1/26/85	Wastewater	7,000 gal unknown	BASF	soda ash and water applied to spill directed to sewer
S-40	11/4/84	DIDP-E	50 gal	BASF	directed to sewer
S-41	9/11/84	Isopropyl alcohol	100 gal	BASF	contained in diked area
S-42	8/2/84	PA	500 gal	BASF	unknown
S-43	7/18/84	DEHP	20 gal	BASF	unknown
S-44	7/9/84	91P	30 gal	BASF	unknown
S-45	6/19/84	DEHP	5-10 gal	BASF	absorbent applied and cleaned up
S-46	1/4/84	#6 fuel oil	10-15 gal	BASF	unknown

EXHIBIT D

843990029

S-47	12/30/83	ZEH	25 gal	BASF	cleaned up
S-48	12/19/83	Heat transfer salt	50 gal	BASF	unknown
S-49	12/13/83	Wastewater	unknown	BASF	directed to sewer
S-50	11/4/83	TOTM	15 gal	BASF	unknown
S-51	8/11/83	ZEH	100 gal	BASF	unknown
S-52	5/13/83	ZEH	30-35 gal	BASF	unknown
S-53	5/9/83	PA	30 gal	BASF	unknown
S-54	12/7/82	ZEH	60 gal	BASF	unknown
S-55	6/15/82	ZEH	60-70 gal	BASF	unknown
S-56	6/2/82	PA	70 gal	BASF	unknown
S-57	4/12/82	PA	15-20 gal	BASF	unknown
S-20A	6/8/88	DEHP	32,000 lbs.	NJDEP/BASF	All free liquid collected approximately 20 cy of soil and debris removed and shipped to Alabama.

EXHIBIT D

843990030

**843990031**

**Exhibit E**

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS  
CENTER, 290 BROADWAY, 18<sup>TH</sup> FLOOR, NY, NY 10007

# **SPILL LOCATION PLAN**

**FIGURE 10-1**

**AUGUST 1990**

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**843990032**